

Appln. No. 09/599,036

Docket No. 22-0134C

REMARKS

Claims 10, 11, 22, 26 and 27 were previously said to be either allowed (claims 26 and 27) or allowable (claims 10, 11 and 22). In Applicant's amendment dated October 17, 2005, these claims were submitted for final review and approval by the Examiner. In the aforementioned Office action, claims 10, 11, 22 and 27 were allowed. Previously allowed claim 26 was rejected under 35 U.S.C. §103(a) as unpatentable over Takahashi et al. (US 6,275,518) in view of Harms et al. (US 6,493,376). By this amendment, Applicant respectfully traverses the rejection of claim 26 and presents new claim 28 for the Examiner's consideration.

Claim 26 was allowed almost two years ago, in the Examiner's Final Rejection dated January 14, 2004, and its allowance was reconfirmed in each subsequent Office action until the most recent one. Applicant is pleased to be able to traverse the new rejection of claim 26, but regrets not having the opportunity to do so earlier in the prosecution.

In remarks accompanying the rejection, the Examiner concedes that Takahashi does not teach the specifics set forth in claim 26, namely that the transition hop cycle comprises downlink beam energy in a first transition cell a first percent of a time period, downlink beam energy in a second transition cell a second percent of the time period and a power gated downlink beam for the remaining percent of the time period. The Examiner goes on to assert that "Harms teaches the transition hop cycle comprises downlink beam energy in a first transition cell a first percent of a time period, downlink beam energy in a second transition cell a second percent of the time period and a

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power gated downlink beam for a remaining percent of the time period (see column 1, lines 59-69)."

Applicant has carefully reviewed the cited language from the Harms patent, but finds nothing even remotely suggesting or supporting the Examiner's contention quoted above. To avoid any possible misunderstanding in this regard, here is the cited paragraph from column 1 of the Harms patent:

These codes are typically shared by all communication signals within a given cell or beam, and time shifted or offset between adjacent beams or cells to create different spreading codes. The time offsets provide unique beam identifiers which are useful for beam-to-beam handoff and for determining signal timing relative to basic communication system timing.

The "codes" referred to are PN (pseudorandom noise) codes used for spectrally spreading signals in order to render them uniquely identifiable with specific users of a multi-user communications system. The specific form of spread spectrum coding with which the Harms patent is concerned is CDMA (code division multiple access) coding, which is widely used in telephone and satellite communication systems. How any of the Harms patent disclosure relates to the present invention as defined in claim 26 is totally unclear. It is Applicant's view that merely citing a paragraph of a newly relied on reference does not adequately explain the relevance of the cited art. Similarly, the Examiner's unexplained reference to column 1, lines 16-19, does nothing to explain the rationale for the rejection. The sentence appearing at lines 16-19 of column 1 merely characterizes the Harms invention as pertaining to spread spectrum communications and PN spreading and identifying codes. The relevance of this sentence to the present invention as defined in claim 26, is unclear and unexplained.

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The present invention, and specifically the invention defined in claim 26, has nothing to do with spread spectrum communication systems. Applicant's position is that the Examiner's reliance on the Harms patent is without any rational basis. Reconsideration and allowance of claim 26 are, therefore, respectfully requested.

Applicant notes with appreciation the withdrawal of the finality of the rejection and takes this opportunity to reintroduce a previously rejected claim. Specifically, new claim 28 is derived from amended original claim 1 and represents the essence of the present invention. As previously argued earlier in this prosecution, the principal reference (Takahashi) does not disclose or suggest a communication system in which beam hopping is a critical feature, but rather, Takahashi discloses a frequency-hopping communication system. Applicant urges the Examiner to reconsider these arguments, which are, in part, reproduced below.

It is Applicant's view that the Takahashi patent is not pertinent to the present invention. The Examiner correctly points out that Takahashi teaches a method for providing a variable hop cycle beam laydown. What this characterization of Takahashi omits to say is that Takahashi is concerned with a frequency hopping scheme wherein the frequency of a transmitted beam is changed on a continuing basis with time. (See, for example, the title, the abstract, FIGS. 2A, 2B, 5A, 5B, 6A, 6B, 7A, 10A, 10B and 13, column 3, lines 50-64, and elsewhere throughout the specification, as well as in all of the claims.) The Examiner contends that Takahashi inherently teaches the steps of Applicant's invention as defined in original claims 1 and 7. Since Applicant's claims originally and repeatedly recited a "hop cycle," it is conceivable that these claims could in some way be read on a system that solely discloses a frequency hopping scheme.

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New claim 28 recites more clearly that the invention claimed is a method for providing a variable beam hop cycle beam laydown. The present invention has to do with sharing the inherent bandwidth of a single downlink beam among multiple cells. In other words the concept of a beam hop cycle is that it defines a duty cycle whereby a single beam is time-shared between or among multiple cells or "hop locations." This concept is clarified in claim 28, which recites "wherein each beam hop cycle defines how the downlink energy of one beam is time-shared between at least two cells."

The distinction between a frequency hopping scheme, as in Takahashi, and the beam hopping scheme of the present invention is believed to have been clearly made. Accordingly, and in the absence of any additional relevant art, new claim 28 is believed to be allowable over Takahashi.

Applicant respectfully requests formal allowance of all of the claims remaining in the application, namely claims 10, 11, 22 and 26-28.

Respectfully submitted,

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